



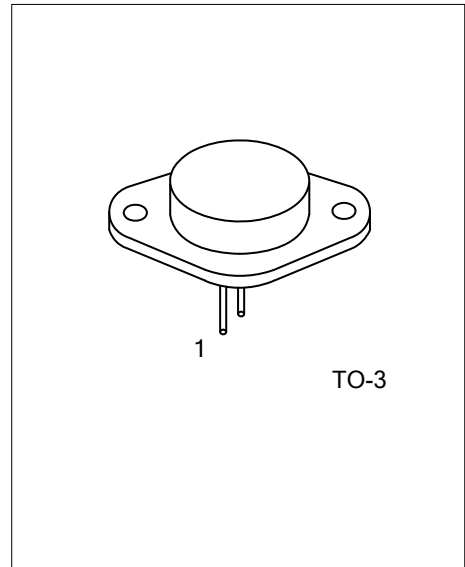
2N3772

SILICON NPN TRANSISTOR

SILICON NPN TRANSISTORS

DESCRIPTION

The UTC **2N3772** is a silicon power transistor in TO-3 metal case. It is designed for linear amplifiers, series pass regulators, and inductive switching applications.



ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2N3772L-T30-Y	2N3772G-T30-Y	TO-3	B	E	C	Tray

<p>2N2955L-T30-Y</p> <p>(1)Packing Type</p> <p>(2)Package Type</p> <p>(3)Lead Free</p>	<p>(1) Y: Tray</p> <p>(2) T30: TO-3</p> <p>(3) G: Halogen Free, L: Lead Free</p>
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■ ABSOLUTE MAXIMUM RATING ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	100	V
Collector-Emitter Voltage	V_{CEO}	60	V
Emitter-Base Voltage	V_{EBO}	7	V
Collector-Emitter Voltage	V_{CEV}	80	V
Collector Current	I_C	30	A
Collector Peak Current (Note 1)	I_{CM}	30	A
Base Current	I_B	5	A
Base Peak Current (Note 1)	I_{BM}	15	A
Power Dissipation ($T_A=25^\circ\text{C}$)	P_D	150	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~ +150	$^\circ\text{C}$

Note 1. Pulse Test: $P_W \leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$

2. Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS						
Collector-Emitter Sustaining Voltage	$V_{CEX(SUS)}$	$I_C=0.2A, V_{BE(OFF)}=1.5V, R_{BE}=100\Omega$	80			V
Collector-Emitter Sustaining Voltage	$V_{CER(SUS)}$	$I_C=0.2A, R_{BE}=100\Omega$	70			V
Collector-Emitter Sustaining Voltage	$V_{CEO(SUS)}$	$I_C=0.2A, I_B=0$	60			V
Collector Cut-off Current	I_{CEO}	$V_{CE}=50V, I_B=0$			10	mA
Collector Cut-off Current	I_{CEX}	$V_{CE}=100V, V_{BE(OFF)}=1.5V$ $V_{CE}=30V, V_{BE(OFF)}=1.5V, T_A=150^\circ\text{C}$			5 10	mA
Collector Cut-off Current	I_{CBO}	$V_{CE}=50V, I_E=0$			5	mA
Emitter Cut-off Current	I_{EBO}	$V_{BE}=7V, I_C=0$			5	mA
ON CHARACTERISTICS						
DC Current Gain (Note)	h_{FE}	$I_C=10A, V_{CE}=4V$ $I_C=20A, V_{CE}=4V$	15 5		60	
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=10A, I_B=1.5A$ $I_C=20A, I_B=4A$			1.4 4.0	V
Base-Emitter On Voltage	$V_{BE(ON)}$	$I_C=10A, V_{CE}=4V$			2.2	V
SECOND BREAKDOWN						
Second Breakdown Collector with Base Forward Biased	$I_{S/b}$	$V_{CE}=60V, T=1.0s, \text{Non-repetitive}$	2.5			A
DYNAMIC CHARACTERISTICS						
Current Gain-Bandwidth Product	f_T	$I_C=1A, V_{CE}=4V, f=50\text{kHz}$	0.2			MHz
Small-Signal Current Gain	h_{FE}	$I_C=1A, V_{CE}=4V, f=1\text{kHz}$	40			

Note: Pulse Test: $P_W \leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$

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